

I Claim:-

1. A method of rendering non-viable micro-organisms in a partially completed container, comprising causing a device to extend in said partially completed container, and, while the device is located in the partially completed container, emitting from the device radiation capable of rendering micro-organisms non-viable and simultaneously applying to the interior surface of the partially completed container a substance capable of rendering micro-organisms non-viable.
2. A method according to claim 1, wherein said causing of said device to extend in said partially completed container comprises displacing said partially completed container over said device.
3. A method according to claim 1 and further comprising, after said causing of said device to extend in said partially completed container, advancing said device and said partially completed container simultaneously in a direction transverse to said partially completed container while performing said emitting and said applying.
4. A method according to claim 1, wherein the distance between said interior surface of the partially completed container and a radiation-emitting part of said device is kept very short while said emitting is being performed.
5. A method according to claim 1, wherein the partially completed container is a body in the form of a cup or beaker, said method further comprising applying a lid to said body to complete the container.

6. A method according to claim 1, wherein said partially completed container is in the form of a folded sleeve closed at one end and open at its other end, said method further comprising folding and sealing said other end to form a top closure.

7. A method according to claim 1, wherein said partially completed container is open at opposite ends, and wherein said causing of said device to extend in said partially completed container comprises producing relative motion between said device and said partially completed container to insert said device into one of the open ends, and to advance said device in the interior of said partially completed container while said emitting and said applying are being performed.

8. A method according to claim 7, wherein said relative movement between said device and said partially completed container is at substantially constant speed while said emitting and said applying are being performed.

9. A method according to claim 7, wherein said causing of said device to extend in said partially completed container comprises causing a mandrel containing said device to extend in said partially completed container from one of the open ends thereof, said method including, after said emitting, closing the other end of said partially completed container while the latter remains on said mandrel.

10. A method according to claim 7, and further comprising either applying caps to the respective opposite ends of the partially completed container to close the partially

completed container sealingly, or folding and sealing the respective opposite ends to provide end closures.

11. A method according to claim 1, wherein said radiation is emitted substantially perpendicularly to a common longitudinal axis of said partially completed container and of said device and substantially throughout 360° around this axis.

12. A method according to claim 11, wherein said substance is emitted from an outer end of said device substantially perpendicularly to said axis and substantially throughout 360° around this axis.

13. Apparatus for use in rendering non-viable micro-organisms in a partially completed container, comprising a device serving both to emit radiation capable of rendering micro-organisms non-viable and to emit a dispersion of a substance capable of rendering micro-organisms non-viable, and a drive arrangement serving to cause said device to extend in said partially completed container.

14. Apparatus according to claim 13, wherein said drive arrangement serves to displace said partially completed container over said device.

15. Apparatus according to claim 13, and further comprising a mandrel containing said device, said drive arrangement serving to cause said mandrel to extend in said partially completed container from one of opposite open ends of said partially completed container, and a closing arrangement disposed at a location along a path of transverse movement of

said mandrel and arranged to close the other end of said partially completed container, said device being arranged to be active in respect of said partially completed container before said closing arrangement is active in respect of said partially completed container.

16. Apparatus according to claim 13, and further comprising a second drive arrangement serving to advance said device and said partially completed container simultaneously in a direction transverse to said partially completed container while said device emits said radiation.

17. Apparatus according to claim 13, wherein said device comprises a rod-shaped source of said radiation serving to emit radiation substantially perpendicularly to a longitudinal axis of said rod-shaped source and substantially throughout 360° around this axis.

18. Apparatus according to claim 17, wherein said device comprises a disperser at an outer end of said rod-shaped source and capable of emitting said substance substantially perpendicularly to said longitudinal axis and through substantially 360° around this axis.

19. Apparatus according to claim 13 and further comprising a mandrel cap at an outer end of said rod-shaped source and enabling the partially completed container to be bottom-sealed.

20. A method of rendering non-viable micro-organisms in a partially completed container open at opposite ends, comprising producing relative motion between a device and

5 said partially completed container to insert said device into one of the open ends, and to advance said device in the interior of said partially completed container while producing from said device a dispersion of a substance capable of rendering micro-organisms non-viable and thereby applying said substance to the interior surface of the partially completed container.

10 21. A method according to claim 20, wherein said relative movement said device and said partially completed container is at substantially constant speed while said applying is being performed.

15 22. A method according to claim 20, wherein said producing of said relative movement comprises causing a mandrel containing said device to extend in said partially completed container from one of the open ends thereof, said method including, after said advance of said device, closing the other end of said partially completed container while the latter remains on said mandrel.

20 23. A method of rendering non-viable micro-organisms in a partially completed container, comprising displacing said partially completed container over a device, and, while the device is located in the partially completed container, emitting from the device radiation capable of rendering micro-organisms non-viable.

25 24. Apparatus for use in rendering non-viable micro-organisms in a partially completed container, comprising a device serving to emit radiation capable of rendering micro-

organisms non-viable, and a drive arrangement serving to displace said partially completed container over said device.

25. A method of rendering non-viable micro-organisms in a partially completed container open at opposite ends, comprising causing a mandrel to extend in said partially completed container from one of the open ends thereof, emitting from a device in said mandrel a medium capable of rendering micro-organisms in said partially completed container non-viable, and subsequently closing the other end of said partially completed container while the latter remains on said mandrel.

26. Apparatus for use in rendering non-viable micro-organisms in a partially completed container open at opposite ends, comprising a mandrel, a device in said mandrel serving to emit a medium capable of rendering micro-organisms in said partially completed container non-viable, a drive arrangement for causing said mandrel to extend in said partially completed container from one of the open ends, a closing arrangement disposed at a location along a path of transverse movement of said mandrel and serving to close the other end of said partially completed container, said device being arranged to be active in respect of said partially completed container before said closing arrangement is active in respect of said partially completed container.

27. A method of rendering non-viable micro-organisms in a partially completed container open at opposite ends, comprising causing a mandrel to extend in said partially

completed container from one of the open ends, whereafter the other end of the partially completed container can be closed, and emitting from a device in said mandrel radiation capable of rendering micro-organisms in said partially completed container non-viable.

28. Apparatus for use in rendering non-viable micro-organisms in a partially completed container open at opposite ends, comprising a mandrel, a device in said mandrel serving to emit radiation capable of rendering micro-organisms in said partially completed container non-viable, a drive arrangement for causing said mandrel to extend in said partially completed container from one of the open ends, and a closing arrangement serving to close the other end of said partially completed container.

29. A method of rendering non-viable micro-organisms in a partially completed container, comprising causing a device to extend in said partially completed container from an open end of said partially completed container, and advancing said device and said partially completed container simultaneously in a direction transverse to an axis of said partially completed container while emitting from said device a medium capable of rendering micro-organisms in said partially completed container non-viable.

30. Apparatus for use in rendering non-viable micro-organisms in a partially completed container, comprising a device serving to emit a medium capable of rendering micro-organisms non-viable, a first drive arrangement serving to

cause said device to extend in said partially completed container from an open end of said partially completed container, and a second arrangement serving to advance said device and said partially completed container simultaneously in a direction transverse to an axis of said partially completed container while said device emits said medium.